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(71) Applicant *(for all designated States except US)*: **SENSOR HIGHWAY LIMITED** [GB/GB]; 8th Floor, South Quay Plaza II, 183 Marsh Wall, London E14 9SH (GB).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **RAMOS, Rogerio, T.** [GB/GB]; 14 Tenby Drive, Chandlers Ford, Hampshire SO53 4NL (GB).

(74) Agent: **KANAK, Wayne, I.**; Gamma House, Enterprise Road, Chilworth Science Park, Southampton SO16 7NS (GB).

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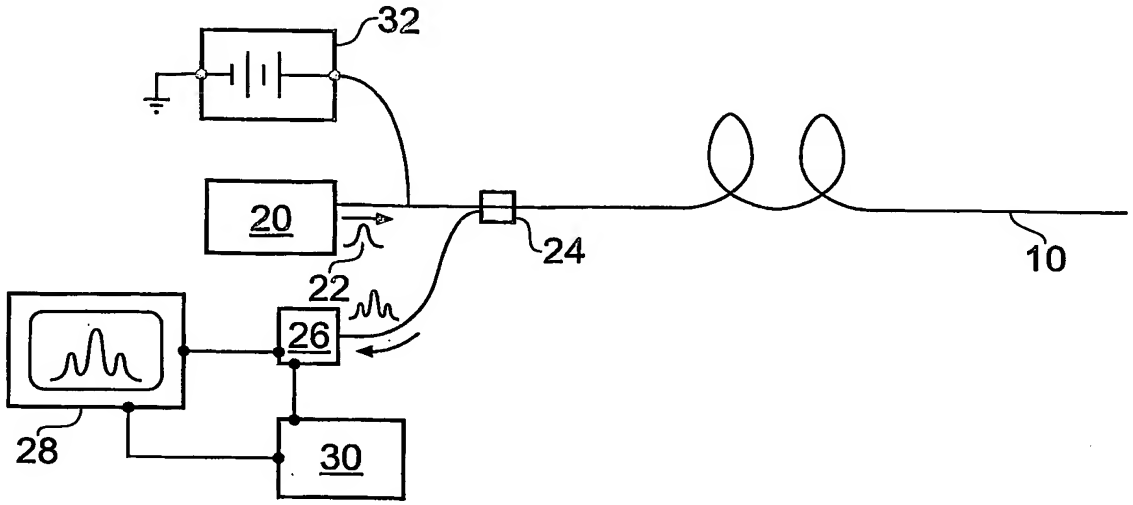
(54) Title: FLUID FLOW MEASUREMENT USING OPTICAL FIBRES



(57) Abstract: A method of monitoring fluid flow uses an optical fibre having a heatable coating. The fibre is disposed within flowing fluid, and the heatable coating heated so that heat is transferred from the coating to the fluid. Optical measurements of the temperature of the heatable coating are made, where the temperature of the heatable coating depends on the flow velocity of the flowing fluid, and the temperature measurement is used to derive information about the flow. The coating may be an electrically resistive layer on the outer surface of the fibre, that is heated by passing electric current through it. This allows distributed flow measurements to be made. Alternatively, discrete measurements can be made if the coating is provided as a thin film layer on an end facet of the fibre. The coating is heated by directing light at a wavelength absorbed by the thin film material along the fibre.

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